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CHICAGO, IL 60606				
EXAMINER				
KHARE, ATUL P				
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1791				
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07/19/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/561,708

Applicant(s)

SPICKEMANN ET AL.

Examiner

ATUL KHARE

Art Unit

1791

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 May 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7, 9, 12, 13, 16-19 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 9, 12, 13, 16-19 and 21-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/6/2010
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Response to Amendment***

1. The amendment filed 06 May 2010 has been entered and fully considered.
2. Claims 1-5, 7, 9, 12, 13, 16-19, and 21-23 are currently pending. Claims 6, 8, 10, 11, 14, 15, and 20 are cancelled. Claim 23 is new.
3. The declaration filed 28 May 2010 has been considered and is moot in view of the claim amendments requiring setting of the slurry in the absence of compression, which is met by the new rejection set forth below.

### ***Information Disclosure Statement***

4. The information disclosure statement filed 06 May 2010 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the publication dates are not accompanied with the references on the IDS. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-5, 7, 9, 12, 13, 16-19, and 21-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

7. Claims 1 and 13 require setting a slurry in the absence of compression, which is not supported by the specification. The declaration filed under 37 CFR 1.132 is insufficient to establish that setting a slurry in the absence of compression is not new matter. Additionally, the instant specification points to sandwiching the slurry between two sheets of paper (p. 5 line 33 to p. 6 line 2) and controlling the board thickness by a forming station 50 (p. 6 lines 4-6, figure 1), which appear to both be steps that involve compression. The specification therefore appears to contradict the amendment requiring setting in the absence of compression.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-5, 7, 9, 13, 16-18, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 3,908,062) in view of Deleuil (US 4,221,599).

12. As to claims 1-3, 7, 9, 13, 16-18, and 21-23, Roberts teaches in a method for making a composite panel: applying a layer of gypsum slurry to a surface of a rigid fiber board, and applying heat to the gypsum slurry to cure it (abstract, column 3 lines 25-34).

The fiber board meets the required support. The curing step meets the required setting step. Since curing is performed by a heater and no recitation is made pertaining to compression during heating (see item 62 at figure 2), setting is performed in the absence of compression as required by the claims.

Roberts teaches that the gypsum slurry may be formed from any slurry of calcium sulfate hemihydrate (column 5 lines 39-40). Roberts does not appear to explicitly disclose adding uncalcined gypsum to the slurry. However, Deleuil teaches in a method for producing modular building units: using a composition of plaster, gypsum, and water (column 2 lines 55-57). The plaster component is analogous to Robert's calcium sulfate hemihydrate (column 4 lines 33-35), which meets the claimed stucco component and comprises calcined gypsum. The 'gypsum' component referred to by Deleuil is uncalcined (column 3 line 47 to column 4 line 9). The gypsum component originates from the neutralization of acidic industrial effluents of a diverse origin by lime (column 3 lines 41-46). At p. 1 lines 18-24 of the instant specification, applicant describes DSG, the most commonly used form of gypsum, as being formed by the flue-gas desulphurization process used at a number of coal burning power stations to remove sulfur dioxide (an acidic component) from the effluent. Therefore, Deleuil's synthetic gypsum meets the claimed uncalcined synthetic gypsum (DSG) component. Deleuil's synthetic gypsum component implicitly meets the claimed inert particulate filler which improves acoustic properties of the final product (see p. 3 lines 5-6 and p. 7 lines 30-32 of the instant disclosure). Plaster is present in the mixture from 30-99 weight percent relative to gypsum (column 5 lines 39-42). Therefore, gypsum is present in the

mixture from 1-70 weight percent relative to plaster, which overlaps with the claimed range. The surface area of the gypsum particles is 200-6,000 cm<sup>2</sup>/g (or 0.02 - 0.6 m<sup>2</sup>/g - see column 4 lines 24-27), which encompasses the claimed range. The particle size distribution of the gypsum is from 20-100 microns (column 4 lines 52-55), which overlaps with the claimed range. The surface area and particle size of the gypsum particles influences processing parameters and the quality of the final product, making these values result effective variables (column 4 lines 19-27, column 4 lines 52-58 of Deleuil). Since they are result effective variables, and since Deleuil teaches their use, it would have been obvious to optimize the surface area and particle size of the mixture's components to help control processing parameters and the quality of the final product.

Roberts teaches a method for forming a composite panel using a gypsum slurry that may be formed from any slurry of calcium sulfate hemihydrate. Deleuil teaches a method for producing modular building units from a calcium sulfate hemihydrate slurry that also contains uncalcined gypsum. It would have been obvious to substitute the Deleuil composition for that of Roberts as a suitable gypsum composition that can be used to form a composite panel.

13. As to claim 4, Deleuil teaches that the uncalcined gypsum undergoes a drying operation prior to being mixed into the slurry (column 3 lines 65-67).
14. As to claim 5, Deleuil teaches that the uncalcined gypsum component can have a water content from 0-40%. This gypsum component is a wet or moist gypsum that meets the required slurry (column 2 lines 56-57).

15. Claims 12 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Roberts (US 3,908,062) in view of Deleuil (US 4,221,599) as applied to claims 1-5, 7, 9, 13, 16-18, and 21-23 above, and further in view of Marcoux et al. (US 5,980,627).

16. As to claims 12 and 19, modified Roberts does not appear to explicitly disclose crushing existing gypsum wallboard to add to the slurry. However, Marcoux teaches in a method for producing commercially useful materials for waste gypsum boards: grinding waste gypsum boards to make particles having a suitable size and treating the material to make calcium sulfate dihydrate and calcium sulfate hemihydrate (column 1 lines 61-67 to column 2 lines 1-27).

Modified Roberts teaches a method that requires providing calcium sulfate hemihydrate/dihydrate compositions, and Marcoux teaches a suitable method for making these required components. It would have been obvious to apply Marcoux manufacturing method as a suitable means for making the gypsum compositions required by modified Roberts.

### ***Response to Arguments***

17. Applicant's arguments filed 06 May 2010 have been fully considered but they are not persuasive.

18. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies are not recited in the rejected claim(s). These features include having 50% air in the final product (Remarks p. 9 lines 6-8), and removing water only by drying (Remarks p.

16 lines 7-8) Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

19. In response to applicant's claim to unexpected results (Remarks pp. 17-19): the claimed ranges for gypsum to stucco do not point to unexpected results because the prior art teaches a range for gypsum to stucco that encompasses that of the claims. The resulting properties of the product created by the combination of Roberts and Deleuil is therefore expected to exhibit the same properties which are created by applicant. Additionally, the combination of references explicitly points to the final product exhibiting improved mechanical and acoustical properties (column 3 lines 4-8 of Roberts, abstract of Deleuil). Additionally, Deleuil teaches a preferred range from plaster to gypsum of 30-60% (which equals 30-60% of gypsum to plaster as well). Deleuil additionally teaches that the gypsum component can contain up to 40% water. If gypsum is added at 30 weight percent, and the gypsum component contains 40% water, the gypsum component alone comprises 18% of the mixture, and each of the preferred claimed ranges is met. If the preferred claimed ranges are met, the improved acoustical properties are also met.

20. Applicant's arguments with respect to claims 1 and 13 have been considered but are moot in view of the new ground(s) of rejection.

21. As described in the rejection under 35 U.S.C. 112 first paragraph above, the limitation requiring setting in the absence of compression is new matter that is not

supported by the specification. The specification appears to contradict this limitation by requiring sandwiching of the slurry and by requiring the use of compression rollers for decreasing board thickness. Additionally, the Roberts reference was applied to meet this new feature.

### ***Conclusion***

22. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ATUL KHARE whose telephone number is (571)270-7608. The examiner can normally be reached on Monday-Thursday 7:30 a.m. - 5:00 p.m. EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on (571)272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ATUL KHARE/  
Examiner, Art Unit 1791

/Matthew J. Daniels/  
Primary Examiner, Art Unit 1791  
7/16/10